

What is claimed is:

1. A method of determining a distance of a projection point of a first imaging beam of an imaging device from a measuring point of a measuring device on a surface of a printing form, both the projection point of the first imaging beam and the measuring point of the measuring device being movable in relation to the surface of the printing form and positions of the imaging beam and the measuring point on the surface of the printing form being determinable in relation to a fixed point, comprising the steps of:
 - imaging a part of a first pattern using the first imaging beam as a function of the position of the imaging beam on the printing form in at least one direction spanning the surface of the printing form;
 - measuring reflected intensity of at least a part of light illuminating the first pattern as a function of the position of the measuring device; and
 - forming a difference of the at least one position of the measuring device and a correlated position of the first imaging beam where the first imaging beam was located as the part of the first pattern was imaged.
2. The method as recited in claim 1 further comprising inking the imaged printing form with printing ink before the measuring step.
3. The method as recited in claim 1 wherein the imaging of the first pattern is performed in two linearly independent directions and the distance is determined in both linearly independent directions.
4. The method as recited in claim 1 wherein the measuring device is a triangulation sensor.
5. The method as recited in claim 1 wherein the surface of the printing form forms least a part of a lateral surface of a rotating body, and further comprising using an angle encoder for determining the position in a peripheral direction, and using a

path measuring system for determining the position in a translation direction parallel to an axis of the rotating body.

6. The method as recited in claim 1 wherein the measurement of the reflected intensity is performed in a measuring raster, axial directions of the measuring raster being linearly independent of at least one direction of the first pattern.
7. The method as recited in claim 1 wherein measurements of the reflected intensity are performed in a measuring raster, the measuring raster being finer than the first pattern.
8. The method as recited in claim 1 wherein the first pattern has periodicity in at least one direction.
9. A method of determining a distance of a first projection point of a first imaging beam of a first imaging device from a second projection point of a second imaging beam of a second imaging device on a surface of a printing form, using a measuring point of a measuring device, the method comprising:
 - imaging a first pattern using the first imaging beam as a function of a position of the first imaging beam on the printing form in at least one direction spanning the surface of the printing form;
 - imaging a second pattern using a second imaging beam as a function of a position of the second imaging beam on the printing form in the at least one direction;
 - measuring the reflected intensity of at least a part of light illuminating the first pattern as a function of a position of the measuring device;
 - measuring the reflected intensity of at least a part of light illuminating the second pattern as a function of the position of the measuring device; and
 - forming a difference of at least one position of the measuring device at a measuring point in the second pattern and a correlated position of the measuring device at a measuring point in the first pattern.

10. A method of determining a distance of a first projection point of a first imaging beam of a first imaging device from a second projection point of a second imaging beam of a second imaging device on a surface of a printing form, comprising the steps of:
 - determining the distance of the first projection point of the first imaging beam from a measuring point of a measuring device on the surface of the printing form as recited in claim 1;
 - determining the distance of the second projection point of the second imaging beam from the measuring point of the measuring device on the surface of the printing form; and
 - forming a sum of the difference of the at least one position of the measuring device and the position of the first imaging beam and the difference of the at least one position of the measuring device and the position of the second imaging beam.
11. The method as recited in claim 9 wherein the first imaging device and the second imaging device are identical.
12. The method as recited in claim 9 wherein the first pattern imaged using the first imaging beam and the second pattern imaged using the second imaging beam are at least partially located in one another or transposed into one another.
13. A method of correcting time triggering of a first imaging beam of a first imaging device from a first triggering instant to a second triggering instant, the first imaging device capable of producing a first projection point on a surface of a printing form, the method comprising:
 - determining a distance of the first projection point to a measuring point or to a second projection point using measured reflected intensity of at least a part of light illuminating a first pattern imaged by the first imaging device as a function

of the position of the measuring point, the first imaging beam being activated at the first triggering instant;

forming the difference of the distance determined and a setpoint distance;

and

determining the second triggering instant as the sum of the first triggering instant and a time necessary to scan the difference with the first projection point, the time necessary being a function of a relative speed of the first imaging beam and an orientation of the surface of the printing form.

14. A method of correcting time triggering of a measuring beam of a measuring device from a first triggering instant to a second triggering instant, the measuring device capable of producing a measuring point on a surface of a printing form, the method comprising:

determining a distance of the measuring point to a first projection point using measured reflected intensity of at least a part of light illuminating a first pattern imaged by the first imaging device as a function of the position of the measuring device, the measuring point being activated at the first triggering instant;

forming a difference of the distance determined and a setpoint distance;

and

determining the second triggering instant as the sum of the first triggering instant and a time necessary in order to scan the difference with the measuring point, the time necessary being a function of a relative speed of the measuring beam and an orientation of the surface of the printing form.

15. A printing unit comprising:

at least one first imaging device;

a measuring device;

a printing form having a surface; and

at least one control unit, the control unit including an electronic system having a memory unit, the memory unit storing a computer program capable of executing the following program steps:

imaging a part of a first pattern using an imaging beam of the first imaging device as a function of the position of the imaging beam on the printing form in at least one direction spanning the surface of the printing form;

measuring reflected intensity of at least a part of light illuminating the first pattern as a function of the position of the measuring device; and

forming a difference of the at least one position of the measuring device and a correlated position of the first imaging beam where the first imaging beam was located as the part of the first pattern was imaged

16. A printing press comprising:

at least one printing unit as recited in claim 15.